

CLAIMS

Having thus described the invention, what is claimed is:

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- Sub A1
1. A water-resistant electronic device comprising:
a housing having an interior portion, said housing is adapted to prevent
water from entering said interior portion;
electronics mounted within said interior portion; and
a heat sink, said heat sink adapted to be coupled to said housing, wherein
said heat sink is adapted to transfer heat from said interior portion to the external
environment.

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The electronic device as recited in claim 1, further comprising an opening
formed in said housing and a door for covering said opening in a sealed manner:

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The electronic device as recited in claim 2, wherein said door is hinged to
said housing.

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The electronic device as recited in claim 1, wherein said heat sink is in
contact with said electronics.

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The electronic device as recited in claim 4, wherein said electronics
comprise an audio power amplifier.

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The electronic device as recited in claim 4, wherein said electronics
comprise a regulator.

1. The electronic device as recited in claim 1, wherein said heat sink includes a base and a fin.

8. The electronic device as recited in claim 7, wherein a substantial portion of said base is in direct contact with said housing.

9. The electronic device as recited in claim 1, wherein said heat sink is coupled to said housing by a fastening member.

10. The electronic device as recited in claim 9, wherein said heat sink includes a protuberance that extends into said housing and is coupled to said fastening member.

11. The electronic device as recited in claim 1, wherein said fastening member includes a screw and a clip.

12. The electronic device as recited in claim 1, further comprising a face plate that is coupled to said housing and adapted to selectively control said electronics.

13. The electronic device as recited in claim 12, wherein said face plate has an opening formed therein and a door that is coupled to said face plate and is adapted to cover said opening in a sealed manner.

14. The electronic device as recited in claim 13, wherein said door is hinged to said face plate.

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15. The electronic device as recited in claim 1, wherein said housing includes a top and a bottom piece, wherein said top and bottom pieces are sealed to prevent water from entering the interior portion of said housing.

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16. The electronic device as recited in claim ¹⁰~~15~~, further comprising a gasket that is used to seal said top and bottom pieces to prevent water from entering the interior portion of said housing.

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17. The electronic device as recited in claim 1, wherein the electronic device comprises a Global Positioning System receiver.

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18. The electronic device as recited in claim 1, wherein the electronic device comprises a communications device.

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19. The electronic device as recited in claim 1, wherein the electronic device comprises a music player.

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20. The electronic device as recited in claim 1, wherein said housing is formed of plastic.

21. A water-resistant electronic device comprising:
a housing having first and second sections, said first and second sections are adapted to be sealed together to form an interior portion, said interior portion is adapted to prevent water from entering therein;

an electronic component, said electronic component is adapted to be mounted in said interior portion; and

a heat sink, said heat sink adapted to be coupled to said housing and is adapted to be coupled with said electronic component, wherein said heat sink is adapted to transfer the heat that is generated by the electronic device to an external environment

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22. The electronic device as recited in claim ¹⁹21, further comprising an opening formed in said housing and a door for covering said opening in a sealed manner.

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23. The electronic device as recited in claim ²⁰22, wherein said door is hinged to said housing.

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24. The electronic device as recited in claim ¹⁹21, wherein said heat sink is in contact with said electronic component.

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25. The electronic device as recited in claim ²²24, wherein said electronic component is a audio power amplifier.

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26. The electronic device as recited in claim ²²24, wherein said electronic component is a regulator.

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27. The electronic device as recited in claim ¹⁹21, wherein said heat sink includes a base and a fin.

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28. The electronic device as recited in claim 27, wherein a substantial portion of said base is in direct contact with said housing.

29. The electronic device as recited in claim 21, wherein said heat sink is coupled to said housing by a fastening mechanism.

30. The electronic device as recited in claim 29, wherein said heat sink includes a protuberance that extends into said housing and is coupled to said fastening member.

31. The electronic device as recited in claim 29, wherein said fastening mechanism includes a screw and a clip.

32. The electronic device as recited in claim 21, further comprising a face plate that is coupled to said housing and adapted to selectively control the electronic device.

33. The electronic device as recited in claim 32, wherein said face plate includes an opening and a hinged door for covering said opening in a sealed manner.

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34. The electronic device as recited in claim 21, further comprising a gasket that is used to seal said top and bottom pieces to prevent water from entering the interior portion of said housing.

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35. The electronic device as recited in claim 21, wherein the electronic device comprises a Global Positioning System receiver.

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36. The electronic device as recited in claim ¹⁹21, wherein the electronic device comprises a communications device.

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37. The electronic device as recited in claim ¹⁹21, wherein said housing is formed of plastic.

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38. The electronic device as recited in claim ¹⁹21, wherein the electronic device comprises a music player.

39. A method for forming a water-resistant enclosure for an electronic device, said device includes a housing, an electronic component and a heat sink, wherein said housing is adapted to seal said electronic component within said housing, wherein said heat sink is adapted to be coupled within said housing and allow for the transfer of heat generated by said electronic component within said housing to the external environment, the method comprising the steps of:
mounting said electronic component in the housing;
sealing the housing in such a way to prevent water from entering the housing; and
coupling the heat sink to said electronic component.

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40. The method as recited in claim ³⁵39, wherein said housing includes a first and a second section, said first and second sections are adapted to be sealed together to form an interior portion, wherein said interior portion is adapted to allow said electronic component to be mounted therein.

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41. The method as recited in claim ³⁵~~39~~, further comprising a gasket adapted to provide a water-tight seal between said first and second pieces.

5 42. The method as recited in claim 39, wherein said heat sink is coupled to said housing by a fastening member.

43. The method as recited in claim 42, wherein said heat sink includes a protuberance that is in contact with said fastening member.

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44. The method as recited in claim ³⁵~~39~~, wherein said heat sink includes a base and a fin.

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45. The method as recited in claim ³⁸~~44~~, wherein a substantial portion of the base is in contact with said housing.

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46. The electronic device as recited in claim ³⁵~~39~~, wherein the electronic device comprises a Global Positioning System receiver.

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47. The electronic device as recited in claim ³⁵~~39~~, wherein the electronic device comprises a communications device.

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48. The electronic device as recited in claim ³⁵~~39~~, wherein the electronic device comprises a music player.

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~~49.~~

The electronic device as recited in claim ³⁵~~39~~, wherein said electronic component is a audio power amplifier.

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The electronic device as recited in claim ³⁵~~39~~, wherein said electronic component is a regulator.

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